The results of the analysis revealed, that the main factors of the functioning and development of financial and credit interaction between banks and enterprises are:

- NBU discount rate;
- market rate of the UAH to the basic foreign currency (US dollar);
- interest rates of the bank on credit resources;
- average profitability of the enterprises of the real sector of the economy;
- profitability of operational activity of enterprises of the real sector of the economy;
- volume of investments in fixed assets of enterprises;
- volume of assets of banks.

Structural changes in the industrial sector need to be made, that is, to increase production and increase the competitiveness of products. To do this, the efficiency of cash flow should be increased, that is, to strengthen the role of financial mechanisms in structural shifts in industry.

It is necessary to increase the financing of long-term investments in PJSC "National Joint-Stock Company “Naftogaz Ukraine”, for this purpose it is necessary to improve the investment climate of the enterprise. From the side of the state to exercise constant control over the use of natural resources. To form the modern structure of the industrial sector that would meet the world's requirements and encourage the inflow of foreign investment into the Ukrainian industry.

3.7 Modern Condition and Efficiency of the Activities of Engineering Enterprises of Ukraine

The transformation of economic relations in Ukraine, which is a consequence of a change in the orientation of the domestic economy towards active integration into the European economic space, radically changes the conditions of operation of enterprises of the engineering industry, which has a great influence on the efficiency of functioning of all spheres of economic activity in the country. Engineering is one of the basic sectors of the economy of Ukraine and the basis of scientific and technological progress in all sectors of the economy. The level of development of engineering enterprises as a whole depends on the efficiency of use and the prospects for the development of the country's resource potential and its competitiveness. Therefore, studies of the economic state of the engineering industry, the efficiency of engineering enterprises in a competitive environment, identifying problems and determining prospects for ensuring their competitiveness, efficiency is relevant and timely, which will determine effective tools for the revival and further progressive development of enterprises in the engineering industry as one of the key industries national economy.

The development of the mechanical engineering industry in Ukraine is examined in the works of many scientists, in particular: A. Amosha, B. Danilishin, V. Dikan, L. Dovgan, M. Kizim, M. Kravchenko, M. Krivokon M., O. Kuzmin, B. Lobach, V. Maksyuk, O. Mnykh, O. Nosyrev, P. Orlov, P. Pererva, I. Posokhov, N. Tarasova, T. Chumakova, I. Shvets and others. The influence of the

transformational world processes on the processing industry and mechanical engineering are highlighted in Amoshi A.I.[1]. Research of Nosyrev A.A. reveal the features of the modern influence of external factors on the financial results of the engineering enterprises of Ukraine[2]. The question of the priorities of the strategic development of the mechanical engineering complex is disclosed in the works of Krivokon' M. O.[3] The following are devoted to the problems of increasing the investment attractiveness of engineering enterprises: Kravchenko M. O., Uvarovsky R. D. and Sheyko I. A.[4],[5].

Questions of developing a methodological approach to managing enterprise competitiveness and ensuring Ukraine's competitiveness based on international experience, managing competitiveness of enterprises in the context of the transformation of the Ukrainian economy, optimizing the management of enterprise competitiveness in an environment of increased uncertainty of risk, modern approaches to ensuring the competitiveness of railway transport in European integration, modern approaches to securing competitiveness of domestic enterprises and the choice of competitiveness assessment method, enterprise competitiveness management based on the process approach, research of the Ukrainian railcar building market and competitiveness of industrial railway transport enterprises in the global and CIS markets, theoretical and practical aspects of corporate risk management studied in publications and monographs Posokhov I. M.[6],[7].

Taking into account the accumulated experience and taking into account modern economic realities, there is a growing need for further research on the current state and directions for improving the performance of industrial enterprises, in particular in the field of mechanical engineering.

The engineering industry is the main component of the processing industry of Ukraine – 65.25% of the total gross industrial product. According to the State

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[1] *Amosha A.I. Neoindustrializatsiya i novaya promyshlennaya politika Ukrainy / A. I. Amosha, V. P. Vishnevskiy, L. A. Zbarazskaya // Economy of the industry. 2012. № 1-2 (57 – 58). PP. 3-36. URL: http://dspace.nbuv.gov.ua/bitstream/handle/123456789/ 41254/ st_57_01. Pdf. (Last accessed 2019/03/10).*

[2] *Nosyryev O. O. Vplyv zovnishnikh faktoriv na finansovi rezultaty mashynobudivnykh pidpryyemstv Ukrayiny. Scientific Bulletin of the UzhNU. Series: International Economic Relations and World Economy. 2016. Issue 10. (2). Pp. 47-51.*

[3] *Kryvokon M.O. Mashynobuduvannya Ukrayiny: stan, dynamika ta perspektyvy rozvytku z vykorystannyam efektyvnykh kontseptsiy antykryzovoho upravlinnya // Intelligence XXI. 2016. No. 5. P. 182-186.*

[4] *Kravchenko M. O., Uvarovskyy R.D. Analiz efektyvnosti innovatsiynoyi diyalnosti vitchyznyanykh mashynobudivnykh pidpryyemstv // Effective economy. 2016. No. 28. P. 23-34. URL: http://ev.fmm.kpi.ua/article/download/108724/103672 (Last accessed: 2019/03/12).*

[5] *Sheyko I.A. Otsinka efektyvnosti innovatsiynoyi diyalnosti mashynobudivnykh pidpryyemstv: the author's abstract of the dissertation k. e. n.: special. 08.00.04 / I.A. Sheyko; NTU "Kharkiv Polytechnic Institute". Kharkiv., 2013. 24 p.*

[6] *Posokhov I.M., Chepizhko O.V. Problemy upravlinnya konkurentospromozhnistyu pidpryyemstv v umovakh transformatsiyi ekonomiky Ukrayiny // Aktualni problemy modelyuvannya ta upravlinnya sotsialno-ekonomichnymy systemamy v umovakh hlobalizatsiyi : materials of the international scientific and practical conference, May 11 2018 Drohobych: RIO DDPU Franko, 2018. P. 285-288.*

[7] *Posokhov I. M. Teoretychni ta praktychni aspekty upravlinnya ryzykamy korporatsiy: monohrafiya. Kharkiv: SPVP "SLOVO", 2014 - 499 p.*

Statistics Service of Ukraine, at the beginning of 2018, the mechanical engineering complex of Ukraine included 4481 enterprises and provided 363.1 thousand jobs, which is 22.2% and 15% of the number of jobs in the processing industry and the entire domestic industry, respectively. The contribution of the gross value added of engineering products to the gross value added of the products of the processing industry amounts to UAH 77635.0 million. (17.4%), which is about 3.7% of the gross value added of the total domestic product of Ukraine[1].

Today, the industry of Ukraine and, in particular, the engineering industry is in difficult conditions, is the result of a combination of the echoes of the global financial crisis of 2008–2009, the inconsistent policy of reforming the economy of Ukraine for many years and a prolonged internal political crisis.

Also, a significant influence on the deterioration of the economic condition of the machinery industry, and, in general, the whole of the domestic industry had a geopolitical conflict in eastern Ukraine, which led to an aggravation of structural problems in the domestic economy, breaking cooperative relations with companies from CIS countries and the loss of markets in the CIS sales.

Table 1 − Indices of industrial production by types of activity for 2010 - 2018 years, %

	Industry, total	**Manufacturing industry**	**Engineering, incl.:**	**- comp., electron. and optical products**	**- equipment**	**- machinery and equipment**	**- avtotr. Vehicles, trailers and semitrailer.**	**- other vehicles**
2010	112,2	116,3	142,4	105,7	163,6	133,9	125,6	161,2
2011	108,0	109,7	115,4	102,4	125,8	109,9	122,0	118,6
2012	99,3	98,0	96,7	89,7	88,6	97,3	87,7	102,6
2013	95,7	92,7	86,4	86,0	91,1	93,5	89,3	78,4
2014	89,9	90,7	79,4	77,9	100,9	88,7	90,3	59,9
2015	87,0	87,4	85,9	71,3	89,8	87,5	118,6	76,3
2016	102,8	104,3	102,0	124,2	100,9	100,9	99,1	98,1
2017	100,4	104,8	107,9	109,2	97,6	106,6	112,4	116,8
2018	101,1	100,8	100,4	96,3	82,2	101,2	106,7	110,7
Average annual growth / decline compared to 2010	-1,98	-1,45	-3,24	-4,2	-2,29	-1,8	3,26	-4,83

Source: calculated according to the data [2]

It should be noted that the domestic engineering industry reacts very sharply to external crisis phenomena in the world economy, as well as to internal ones, demonstrating the greatest drop in the production index among other industries. This is due to the close correlation of production volumes in mechanical engineering with the dynamics of demand for production equipment mainly in the manufacturing sector and, in general, in all sectors of the economy.

[1] *Statistical information. State Statistics Service. URL: http://www.ukrstat.gov.ua (Last accessed: 2019/03/12).*

[2] *Indices of industrial production by types of activity for 2010-2018 years. State Statistics Service. URL: http://www.ukrstat.gov.ua (Last accessed: 2019/03/20).*

Study of the current state of development and the level of competitiveness of engineering enterprises of Ukraine will be carried out by analyzing the dynamics of changes in production volumes and the share of engineering products in the total volume of Ukrainian production, assessing the efficiency of economic activities of engineering enterprises and their access to sales channels in the foreign and domestic markets.

Table 1 presents indices of industrial products, processing industry and engineering by classification groups for 2010-2018. Analysis of the dynamics of changes in the mechanical engineering indices of Ukraine for the period 2010 – 2018 (Fig. 1) shows that in the period 2010-2011 mechanical engineering has little accelerated growth rates (142.4% and 115%, respectively) compared with both the processing industry (116.3% and 109.7%, respectively) and the overall industry growth rate (112.2% and 108% respectively).

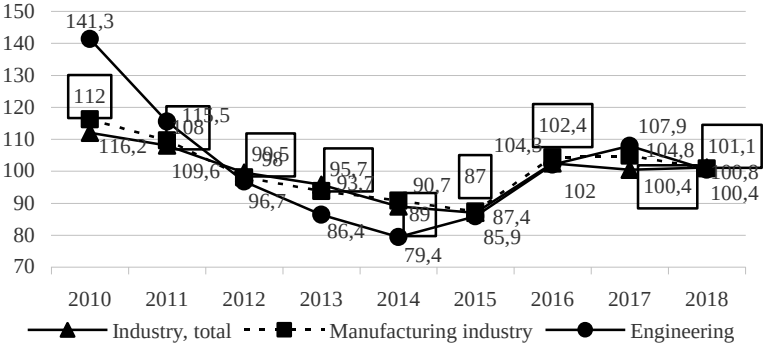

Figure 1 – Dynamics of changes in production indices of machine building, manufacturing industry and industry in general for the period 2010-2018

This is explained by the increase in the volume of production of mechanical engineering products focused on export, and, in general, by the positive dynamics of stabilization of the main macroeconomic indicators after the world crisis of 2008–2009.

However, from 2012 to 2015, there has been a decrease in industrial production, and the rate of decline in the production of engineering products exceeds not only the rate of decline in production of the processing industry, but also the rate of decline in industrial production as a whole. This is due to the stagnation processes in 2012–2013, the breakdown of partnership agreements and the loss of the markets of Russia and the CIS countries in 2014–2015, as well as the insufficient technical level of production, product mismatch with the requirements of the world market, the reorientation of domestic enterprises to the consumption of imported engineering products. The largest decline in the production of engineering products for the period 2012-2015 was noted in the production of locomotives and rolling stock – up to 37.3% in 2014 and 41.4% in

2015, as well as in the production of motor vehicles – up to 54.2% in 2014 and 49,4% in 2015.

Further, in the period 2016 – 2017 there is seen a recovery in production due to stabilizing measures and diversification of sales markets. Therefore, in 2016, the production index was 102.8% and 102.0% in industry and engineering, respectively, which is a positive trend. In 2017, it is possible to note the continuation of the positive growth dynamics of industrial production indices (100.4% and 107.9%, in industry and engineering, respectively).

However, in 2018, the total volume of production of industrial products and engineering products was almost at the level of indicators in 2017 (production index was 101.1% in industry and 100.8% in engineering), which indicates a slowdown and instability in the recovery of industrial production. The highest growth rates in 2018 relative to 2017 can be noted in the production of goods in the groups "Production of vehicles" – 110.7% and "Production of vehicles, trailers and semi-trailers" – 106.7%. At the same time, the most production up to 82.2% can be noted in the group "Electrical Equipment Production".

Also, the analysis of the indicators of the average annual growth rate (reduction) in the production of engineering products (-3.7%) and industry (-2.4%) for the period 2010-2018 shows that the level of industrial production in 2018 has not yet reached levels of 2010. The largest average annual reduction in the volume of mechanical engineering production during the period under review was noted in the following groups: “Manufacture of vehicles” (-4.83%) and “Manufacture of computers, electronic and optical products” (-4.2%).

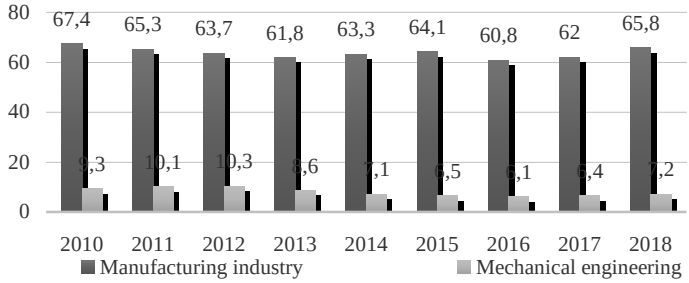

Figure 2 – Dynamics of changes in the share of the processing industry and engineering in the total volume of industrial production, in % for the period 2010-2018

Source: constructed by the author according to the data[1]

Analysis of the dynamics of changes in the structure of industry in the period 2010-2018 shows the regressive nature of these changes (Fig. 2). So, at the beginning of 2017, the share of the processing industry declined and machine building fell to 60.8% (-9.8%) and 6.1% (-31.2%) in the total industrial output,

[1] *The volume of industrial products (goods and services). State Statistics Service. URL: http://www.ukrstat.gov.ua (Last accessed: 2019/03/20).*

against 67.4% and 9.3%, respectively, according to data for 2010. The recovery processes of industrial production in 2017 were reflected in some increase in the share of the processing industry to 62.0% and engineering to 6.4%. This trend continued in 2018 and the share of the processing industry and engineering rose to 65.8% and 7.2%, respectively, which is certainly a positive trend. However, the analysis of the dynamics of the restoration of the structure of mechanical engineering (Fig. 3) shows insufficient growth rates of production.

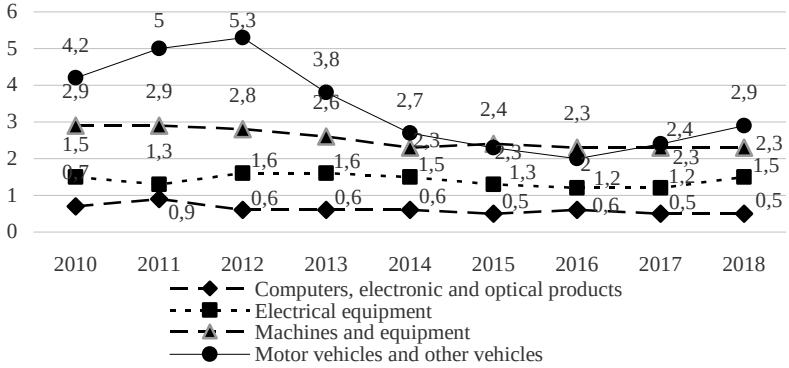

Figure 3 – Dynamics of changes in the share of the main groups of mechanical engineering in the total volume of industrial production, % for 2010-2018

Source: constructed by the author according to the data[1]

Thus, at the beginning of 2019, the largest reduction in the share of mechanical engineering production can be noted in the following groups: "Production of motor vehicles, trailers and semi-trailers and other vehicles" – by 31% (2.9% in 2018 against 4.2% in 2010); "Manufacture of machinery and equipment not classified elsewhere" – by 20.7% (2.3% in 2018 against 2.8% in 2010). It should be noted that domestic engineering has an ultra-low specific weight in the total industrial output, while in most highly developed countries of the world (for example, Germany, Japan, England, Italy), the share of engineering in the industrial production structure reaches 30-50% and has priority of development among other industries[2].

Economic efficiency is a prerequisite for ensuring the competitiveness of the enterprise. On the basis of statistical data of the State Statistics Service of Ukraine, we will analyze the efficiency of the economic activities of engineering enterprises for the period 2010-2018 (Table 2, Table 3). The financial results of the engineering enterprises for 2010-2018 reflect the crisis and recovery processes in the engineering industry and, in general, in the industry of Ukraine for the

[1] *The volume of industrial products (goods and services) by economic activity. State Statistics Service. URL: http://www.ukrstat.gov.ua (Last accessed: 2019/03/20).*

[2] *Kuzmin O. YE., Lipych L. H., Melnyk O. H., Tovstenyuk O. V. Diahnostyka investytsiynoyi pryvablyvosti pidpryyemstv: kontseptsiya ta instrumentariy: monograph. Lutsk: Vezha-druk, 2014. 196 p.*

specified period. Analysis of the dynamics of changes in the total profit of engineering enterprises shows the recovery of economic activity in the period 2010-2011 after the crisis of 2008-2009, and profit growth in 2011 by 6434.7 million UAH. (+ 153.03%). However, in the period from 2012 to 2016, the change for profit shows a negative trend of its decrease from 9268.8 million UAH in 2012 before receiving losses in the period 2014-2016.

Table 2 – Financial results of engineering enterprises of Ukraine for 2010–2017

Year	Financial result before tax (UAH million)	Profitable enterprises		Companies that have received damage		Net profit (UAH million)
		in% to community number of enterprises	financial result (million UAH)	in% to community number of enterprises	financial result (million UAH)	
2010	6859,0	60,2	9771,5	39,8	2912,5	4204,9
2011	14637,6	67,3	17053,6	32,7	2416,0	10639,6
2012	13322,8	67,0	16515,8	33,0	3193,0	9268,8
2013	5526,9	65,2	9597,8	34,8	4070,9	2768,6
2014	-20501,5	64,7	9841,6	35,3	30343,1	-22380,2
2015	-12651,6	74,1	15950,6	25,9	28602,2	-15374,0
2016	1696,2	77,2	14522,4	22,8	12826,2	-732,2
2017	9770,0	77,7	18965,6	22,3	9195,6	6119,7

Source: compiled by the authors according to the data[1]

Adaptation to new economic conditions (changes in sales markets and, in general, the vector of strategic partnership) in 2015–2017 contributed to the stabilization of the economic activities of engineering enterprises and their profit in the amount of 6119.7 million UAH. According to 2017. Let's note that the number of engineering enterprises that made a profit in 2017 increased to 77.7% (of the total number of engineering enterprises) against 60.2% in 2010.

Analysis of the financial results of large and medium-sized enterprises of mechanical engineering in Ukraine in January-September 2018, also shows an increase in profits to 6309.7 million UAH. (+ 25.2%) relative to the corresponding period of 2017. However, the number of enterprises that made a profit in January-September 2018 decreased to 74.4% against 76.0% of the corresponding period of 2017.

Table 3 – Financial results of large and medium-sized mechanical engineering enterprises of Ukraine for January-September 2017-2018

Year	Financial result before tax (UAH million)	Profitable enterprises		Unprofitable enterprises		Net profit (UAH million)
		in % of the total number of enterprises	financial result (million UAH)	in % of the total number of enterprises	financial result (million UAH)	
2017	7143,4	76,0	11952,2	24,0	4808,9	5039,7
2018	8761,5	74,4	14133,9	25,5	5372,4	6309,7

[1] *Financial results of enterprises. State Statistics Service. URL: http://www.ukrstat.gov.ua (Last accessed: 2019/03/20).*

Source: compiled by the authors according to the data[1]

First, this indicates that in the period 2010-2018 a group of enterprises has been formed that make the best use of their adaptation capabilities through economic integration in rapidly changing environmental conditions, but other engineering enterprises that are unprofitable have worsened their condition.

Analysis of the dynamics of changes in the profitability of engineering enterprises (Tab. 4, Tab. 5), as the main indicators of the achieved level of economic efficiency of enterprises, showed that for the period 2010-2018 profitability was the highest in 2012 (9.9%). Note that in the period 2010-2013, the profitability indicators of engineering enterprises had the greatest value in terms of profitability indicators of all types of industrial activity, which shows a significant, underused, economic potential of engineering enterprises in Ukraine.

Table 4 – The profitability of the operating activities of mechanical engineering enterprises of Ukraine for 2010-2017, %

Article	2010	2011	2012	2013	2014	2015	2016	2017	Deviation of 2017 from 2010, %
Mechanical Engineering (26-30), incl.:	**7,0**	**9,3**	**9,9**	**6,6**	**-2,4**	**3,4**	**8,0**	**9,8**	40,00
- comp., electron. and optical products (26)	3,6	13,8	5,8	4,2	-8,0	6,3	12,0	13,3	269,44
- equipment (27)	6,4	4,1	9,3	…	-2,9	-1,5	8,1	7,1	10,94
- machinery and equipment (28)	5,5	5,6	6,2	5,4	-1,4	3,2	8,2	7,8	41,82
- avtomob. vehicles, trailers and semitrailers (29)	1,3	4,5	1,6	4,0	-2,5	7,3	7,0	5,8	346,15
- other vehicles (30)	11,2	13,8	15,3	8,0	-1,3	4,9	6,8	16,0	42,86

Source: compiled by the authors according to the data[2]

The decline in the level of profitability of the operating activities of engineering enterprises in 2014 to a negative value of 2.4% is due to the negative impact of the political crisis and the loss of traditional export markets. However, the further growth of the profitability indicator from 3.4% in 2015 to 9.8% in 2017 confirms the tendency of stabilization of economic activity in the period 2015-2017 and reflects the trend of a steady decrease in the energy intensity of products during this period. It should be noted that in 2017, profitability increased to 9.8% (by 40%) relative to 7.0% in 2010, which is certainly a positive trend.

Analysis of the profitability of operating activities by major groups of engineering in the period 2010-2017 shows an increase in profitability for all groups, but the growth rates of profitability of various types of activities are not the same for all of them. In 2017, machine building enterprises had the highest level of profitability by groups of activities: "Computer manufacturing, electronic and

[1] *Financial results of large and medium-sized mechanical engineering enterprises. State Statistics Service. URL: http://www.ukrstat.gov.ua (Last accessed: 2019/03/20).*

[2] *Cost-effectiveness of operating and all activity of enterprises by types of economic activity with division into large, medium, small and micro enterprises for 2010-2017 years. State Statistics Service. URL:http://www.ukrstat.gov.ua (Last accessed: 2019/03/22).*

optical products" – 13.3% (+ 269.44%) and "Manufacture of motor vehicles, trailers and semi-trailers" – 5, 8 % (+ 346.15%), relative to 3.6% and 1.3%, respectively, in 2010.The revealed results of a high level of profitability of enterprises by groups of mechanical engineering are mainly due to the competitive economic advantages of their products both civilian and destination in the domestic market and similar (by domestic technical standards) CIS markets.

However, according to January-September 2018, despite the growth in net profit during this period, the profitability of engineering enterprises decreased to 8.6% (-12.24%) relative to 9.8% for the corresponding period of 2017. Also, it can be noted that over a given period of time, profitability increased only in the "Electrical Equipment Production" line of business up to 14.6% (+ 128.13%), while in all other types of engineering activities, there was a decrease in profitability, which indicates an increase in the costs of enterprises of these activities.

The state of the basic means of production and their reproduction by means of technical re-equipment with the use of the newest technologies has a significant impact on the efficiency of the activities of engineering enterprises.

The analysis of fixed assets of the engineering industry of Ukraine for the period 2010-2017 shows a decrease in their value from 234 174.0 million UAH in 2010 to 126 552, 6 million UAH according to the end of 2017, that is, 46%. Also, the degree of depreciation of fixed assets during this period ranges from 55-65% with very low annual rates of renewal of funds (about 1-3%). Therefore, at the beginning of 2018 the degree of depreciation of fixed assets of enterprises of mechanical engineering is 60.4% with the growth rate of fixed assets – 103.2%. The greatest value of depreciation of fixed assets falls on the group of enterprises by the type of activity "Manufacture of vehicles" – 65, 8%, with the growth rate of fixed assets – 104.7%.

Table 5 – Profitability of the operating activities of the engineering enterprises of Ukraine in January-September 2017-2018, %

Article	2017 January - September, %	2018 January-September, %	Deviation 2018 from 2017, % for January - September
Mechanical Engineering (26-30), incl.:	**9,8**	**8,6**	**-12,24**
- comp., electron. and optical products (26)	15,2	14,4	-5,26
- electrical equipment	6,4	14,6	128,13
- machinery and equipment (28)	8,2	6,6	-19,51
- avtomob., vehicles, trailers and other vehicles (29+30)	12,3	6,7	-45,53

Source: compiled by the authors according to the data[1]

The identified trends indicate a catastrophic reduction in the production and technological base of the engineering industry and the use of inefficient means, resource, energy and material-intensive production at operating engineering

[1] *Cost-effectiveness of operating activities of large and medium-sized enterprises. State Statistics Service. URL:http://www.ukrstat.gov.ua (Last accessed: 2019/03/22).*

enterprises, which has a very negative impact on the cost and quality of products, reduces the competitiveness of domestic engineering products in the domestic and foreign markets.

According to many scientists[1],[2],[3],[4], the low level of technological development of production capacities of engineering enterprises is one of the main reasons for the technological backwardness of engineering enterprises and indicates insufficient state support for the basic industry, which determines the low level of technological development of industrial production throughout the country.

It should be noted that the effective implementation of the production potential largely depends on the state of the investment and innovation support of enterprises. Analysis of the dynamics of capital investments for the period 2010-2018 shows an increase in their volume from UAH 55.38 billion in industry and from 4.15 billion UAH in mechanical engineering in 2010 to 179.72 billion UAH and 11.96 billion UAH, respectively, in 2018. However, this period is characterize by instability of the investment process: 2010-2013 – growth in capital investment; 2014-2015 – a sharp reduction in capital investment; in the period 2016-2018 the volume of capital investments already has a relatively stable upward trend. Thus, in 2018, the volume of capital investments in the engineering industry grew by UAH 1,645.84 million (+ 16%) relative to 2017. However, the share of capital investments in the engineering industry in the total volume of capital investments in the industry of Ukraine, according to 2018, decreased to 6.65% from 7.2% in 2017.

The main source of financing of capital investments during the analyzed period is the own funds of enterprises and organizations, due to which in 2018 71.3% of capital investments were used. Considering the high degree of depreciation of fixed assets in machine building and the low rate of their renewal, the effective operation of enterprises requires significantly larger than existing investments for the technical modernization of enterprises.

However, the share of capital investments in the economy of Ukraine from other sources of financing in 2018 was very low: state budget funds – 4.0%; local budget funds – 8.7%; bank loans – 6.7%. We can also note that the share of capital investors of foreign investors in 2018 is only 0.3% of all capital investments versus

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[1] *Forsayt ekonomiky Ukrayiny: serednostrokovyy (2015–2020 roky) i dovhostrokovyy (2020– 2030 roky) chasovi horyzonty / scientific supervisor of the project acad. National Academy of Sciences of Ukraine M.Z. Zgurovsky. Kyiv: NTUU "KPI", 2015. 136 p. URL: http://wdc.org.ua/sites/default/files/ WDC-IASA-FORSIGHT-UA.pdf. (Last accessed: 2019/03/18).*

[2] *Shandova N. V. Stsenarnyy pidkhid do vyznachennya napryamkiv rozvytku pidpryyemstva // Bulletin of ZHDTU. 2017 No. 1 (79). P. 165-169.*

[3] *Posokhov I. M., Chepizhko O.V. Suchasni pidkhody do zabezpechennya konkurentospromozhnosti vitchyznyanykh pidpryyemstv // National economy of Ukraine in conditions of European integration: materials of the All-Ukrainian scientific and practical conference, October 19-20, 2017 Dnepr: NMetAU, 2017. P. 546-548.*

[4] *Posokhov I. M. Doslidzhennya rynku vahonobuduvannya Ukrayiny ta konkurentospromozhnosti promyslovykh pidpryyemstv zaliznychnoho transportu na svitovomu rynku ta rynku krayin SND // Bulletin of the National Academy of Sciences of Ukraine. tech Unitary Enterprise "KhPI": collection of scientific works Series: Technical progress and production efficiency. Kharkiv: NTU "KhPI", 2015. № 60 (1169). P. 115-118.*

1.4% in 2017, despite the fact that, according to Moody's Investors Service, Ukraine has improved its credit rating in the international economic list from Caa3 to Caa2 – the forecast is "positive". The identified trends show the need to significantly improve the institutional framework for a favorable investment climate in Ukraine, with the priority of developing high-tech manufacturing in engineering, by improving the effectiveness of the legal and organizational framework for encouraging and supporting foreign and domestic investors.

Analyzing the dynamics and priorities of innovation in engineering for the period 2010-2018, we can note a stable trend of innovation activity reducing and the lack of progressive development.

In the presented project "Strategy of innovative development of Ukraine for the period until 2030" in 2018, Ukrainian specialists point to a gradual degradation of the innovative potential of Ukraine over a long period of time: "... according to the State Statistics Service, the number of researchers in Ukraine is rapidly decreasing (from 133,744 people in 2010 to 59,392 in 2017), the science-intensiveness of GDP (expenditure on research and development for all sources as a percentage of GDP) in 2017 was only 0.45%, the dynamics of the number of enterprises engaged in innovation, was negative (in 2017, there was a reduction in the number of industrial enterprises that carried out innovation activity, by 9% compared with 2016 to 16.2% of all industrial enterprises)…"[1].

In the period 2010-2017, the number of engineering enterprises that were engaged in innovative activities increased from 19.46% in 2010 to 26.5% compared to the total number of enterprises in the engineering industry. However, this positive trend is explained by the reduction in the total number of engineering enterprises from 1881 units in 2010 to 729 units in 2017, that is, by 61.2%, while the number of enterprises that introduced innovations in this period also decreased by 53.7%, from 417 units in 2010 to 193 units in 2017. The main direction of innovation activity (in terms of the cost of innovation) of engineering enterprises in 2017 was the purchase of machinery, equipment, installations and other fixed assets (120 units, 62.2% of the total number of innovative enterprises, relative to 209 units, 50, 1% in 2010). Note that the number of enterprises where research work was carried out (internal and external) in 2017 also decreased by 55.2% (from 192 units in 2010 to 86 units in 2017). The smallest number of innovative enterprises is engaged in the direction of innovation activity "the acquisition of new knowledge" – 8.3% relative to the total number of innovative enterprises of mechanical engineering.

The preemptive investment of mechanical engineering enterprises into materialized innovations is due to the high degree of instability of the economic environment and the low level of institutional support for the innovation activities of enterprises, which forces enterprises to innovate, only if they are able to quickly recoup innovative costs (updating and upgrading equipment, introducing new technologies).

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[1] *Stratehiya innovatsiynoho rozvytku Ukrayiny na period do 2030 roku. URL:http://mon.gov.ua/storage/app/media/ gromadske-obgovorennya/2018/10/22/innovatsiynogo-rozvitku-ukraini.pdf (Last accessed: 2019/03/23).*

The main source of investment in innovation, as well as investment in general, of the entire economic activity of enterprises in Ukraine during the period 2010–1017 are the enterprises and organizations own funds, due to which in 2017 7704, 32 million UAH were mastered (84.5% of the total investment) relative to 4775.24 million (59.3%) in 2010.

The current state of innovation in engineering is a consequence of the lack of a consistent innovation policy in Ukraine on the formation of an innovation ecosystem that would ensure the implementation of financial and other mechanisms for the development of innovation activity.

One of the main factors of competitiveness of an enterprise is its ability to carry out effective sales activities and access to the distribution channels in the external and internal markets. One of the peculiarities of the domestic engineering industry is that it has always been export-oriented, which was of strategic importance for the effective functioning and competitiveness of industrial enterprises.

An analysis of trends in the foreign economic activity of the engineering enterprises of Ukraine (Figure 3) shows that in the period 2010-2012, export-import operations were stable; in the period 2013-2015 there is a decrease in the volume of both export of engineering products ($ 4,620.04 million USA, 35.6% compared to 2012) and import of engineering products ($ 8,017.0 million USA, 37.7% relative to 2012), which is explained by the internal socio-economic crisis and the reorientation of a significant part of Ukrainian foreign trade from Russia to business partners from other countries.

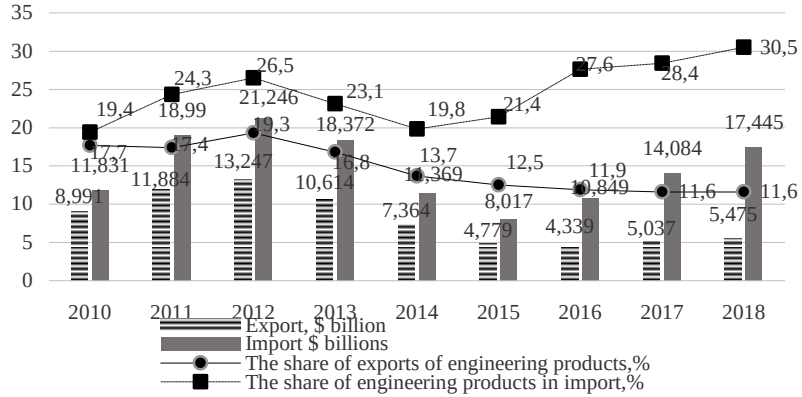

Figure. 4 – Dynamics of changes in the volume and share of export / import of engineering products in the total export / import of industrial production in 2010-2018

Source: constructed by the author according to the data[1]

[1] *Commodity structure of foreign trade in 2010-2017. State Statistics Service. URL:http://www.ukrstat.gov.ua (Last accessed: 2019/03/22).*

The period of 2016-2018 is described by an increase in the volume of export-import operations. Thus, in 2016, the volume of imports of engineering products rose to $ 11429.05 million, which is explained by the revival of demand for engineering products in the domestic market (metallurgy, construction).

Diversification of sales markets in 2017-2018 contributed to the growth of export of engineering products by 17.6% in 2017 and by 8.3% in 2018 relative to the data of 2016 and 2017, respectively. The largest increase in the volume of export of engineering products (1,300 million Euro) accounted for the export of cable for passenger cars ("85440000 Wires insulated and other insulated electrical conductors").

According to preliminary data from the State Statistics Committee of Ukraine for January – November 2018, the key export goods of the Ukrainian engineering steel are cable and wire products, accessories for telephones, electric kettles, bearings, equipment for metallurgy, refrigeration equipment for supermarkets and warehouses, washing machines.

The largest growth is accounted for by the products of the Machines, Equipment and Machines; electrical equipment " (11.8%), where the largest increase in export volume was on commodity items -" 8474000000 Equipment for sorting, sifting, etc." ($ 64.42 million), "8517000000 Telephone sets and other equipment" (at $ 71.678 million), "8544000000 Insulated wires and other insulated electrical conductors)" (for $ 168.751 million), "8545000000 Coal electrodes, carbon brushes, coal for lamps or batteries, etc." (for $ 69.67 million). Exports of products of the commodity group "Ground Transportation Vehicles, Aircraft, Floating Vehicles funds also increased by 7.6% and the largest increase in exports was in commodity items: "Parts of railway locomotives or motor cars of a tramway or rolling stock" (by $ 21.92 million), "Parts of aircraft" (by $ 23,23 million), "Cruise ships, excursion ships, ferries, cargo ships, barges and other floating equipment" (for $ 176.64 million), "Yachts and other floating equipment" (for $ 31.09 million).

The main increase in export (430.48 million dollars) in January – November 2018 falls on the EU countries, which have a share in the export of domestic engineering – 57.04%. Of these, the largest consumers of engineering products were Hungary (28.44%), Germany (18.12%) and Poland (15.4%). Also, we note the growth in the supply of export of Ukrainian engineering products to the Asian markets – by $ 241.07 million, (193.53%) and Africa – by $ 95.44 million, (368.26%), which indicates on the use of price competitive advantages of Ukrainian engineering products.

Analysis of the dynamics of changes in the volume of foreign trade in machinery goods shows that the share of machinery exports to the CIS is steadily decreasing and, according to January-November 2018, amounted to 23.6% (versus 40.6% compared to the corresponding period of 2011) of the total exports of Ukrainian products mechanical engineering.

Note, that the largest volume of exports of engineering products among the CIS countries is consumed by the industrial market of Russia (74.36% of the volume of exports of engineering products to the CIS countries and 17.59% of the total export of Ukrainian engineering products), due to the long period of

integration of Ukrainian enterprises in the integral engineering complex of the USSR. So, the share of some commodity items in the export of mechanical engineering to the Russian market is still very significant (turbo engines, steam and gas turbines (31.28%), parts for railway locomotives and rolling stock (47.42%), land vehicles, except railway and parts thereof (30.46%)). This is mainly due to the presence of technical requirements for the quality of engineering products, similar to those existing in Ukraine.

Thus, the analysis of foreign economic operations for the period 2010-2018 allows us to determine the trend of a constant increase in the volume of import of machinery and equipment (except for the crisis years 2013-2015) with an average annual growth rate of 14.4% and a stable excess of import volumes over export, which, the same period, shows an average annual growth rate of 0.75%.

This trend is very negative and demonstrates the process of stagnation in the development of export operations of the Ukrainian engineering complex, but at the same time shows the presence of significant import substitution opportunities for domestic manufacturers.

Among the main problems of the development of mechanical engineering enterprises currently, we believe it is necessary to note the low level of satisfaction of the domestic market to domestic products. The assessment of the dynamics of changes in the volume of consumption of engineering products in the domestic market of Ukraine (Table 6) shows a steady decline in the share of domestic engineering products in the total consumption of engineering products in the domestic market throughout the period of 2010-2015. It should be noted, that this assessment is quite general and in the context of individual industries can and should be clarified.

So, in 2015, the share of consumption of domestic engineering products decreased by 71.3% and amounted to 5.52% of the total consumption of engineering products in the domestic market, compared to 19.26% in 2010. The reduction in the capacity of the domestic market as of the end of 2015 to UAH 196174.18 billion ($ 89.76 billion USA) due to the reduction in the level of solvency of enterprises and the population, and the accumulation of pent-up demand.

It should be noted that the given assessment is rather general and in the context of individual industries can and should be clarified. At the same time, the consumption of about 80–95% of the export of mechanical engineering products with high added value in the domestic market during 2010–2018 (with proper government support and vigorous innovation by enterprises) can and should be a reserve for the growth of productivity and economic efficiency of domestic engineering enterprises and the economy of Ukraine in general.

Thus, in the process of this research, the trends in the development of machine building in Ukraine were analyzed. It was revealed that in the process of adapting to the changing conditions of the financial and economic environment, engineering enterprises had difficulties with technical and technological re-equipment, attracting additional investment and innovation resources when entering a new stage of their development, searching for stable cooperation in the

Table 6 – Analysis of trends in the domestic market of mechanical engineering of Ukraine (2010-2018)

Article	2010	2011	2012	2013	2014	2015	2016	2017	2018
The volume of sales of engineering products, million UAH	97056,90	130847,90	140539,3	113926,6	101924,7	115261,7	131351,8	168281,9	182103,1
Weighted average rate UAH / USD. (At $ 100 according to the NBU)	794,33	805,04	806,74	811,9	1191,4	2185,5	2555,5	2660,7	2668,4
Export Volume, Million $ USA	9185,16	11895,23	13286,59	10615,29	7361,33	4778,60	4339,30	5054,28	5475,10
Export volume,% by previous year	135	130	112	79	69	65	91	117	108
Import Volume, Million $ USA	12717,63	20046,36	22464,61	19465,79	12041,83	8480,84	11429,05	14867,66	17445,32
Import volume,% by previous year	141	161	112	86	62	71	135	130	117
The volume of sales of domestic engineering products in the domestic market (Total sales – export), billion UAH	24096,39	35086,51	33351,00	27741,07	14221,82	10825,32	20461,08	33802,54	36003,76
The actual capacity of the domestic market (total sales – export + import), billion UAH	125116,37	196467,76	214581,99	185783,79	157688,22	196174,18	312530,35	429386,44	501520,10
The share of consumption of domestic engineering products in the total consumption of engineering products in the domestic market,%	19,26	17,86	15,54	14,93	9,02	5,52	6,55	7,87	7,18

Source: calculated according to the data[1],[2]

[1] *Economic activity. Industry. State Statistics Service. URL:http://www.ukrstat.gov.ua (Last accessed: 2019/03/22).*

[2] *Indicators of the foreign exchange market for 2010-2018. The National Bank of Ukraine. https://bank.gov.ua/control/uk/publish/category?cat_id (Last accessed: 2019/03/22).*

global market, establishing relationships with new counterparties and by consumers.

The study of the current state and development trends of the domestic engineering industry allows us to conclude that in the process of adapting to the changing financial and economic conditions, engineering enterprises encountered difficulties in carrying out effective economic activities and ensuring competitiveness, which were adversely affected by factors related to the economic development strategy of countries in general.

The identified problems and negative trends in the development of the engineering industry of Ukraine require radical changes, that will enable enterprises: to carry out organizational and financial restructuring in the new business environment; respond promptly to changes in the financial and economic environment in conditions of high uncertainty; diversify the marketing system; implement an effective investment and innovation development strategy.

Given the market potential and capabilities of engineering enterprises to meet potential demand in the domestic and foreign commodity markets, with a consistent and systematic state policy of development and industrial modernization, with a priority development of the engineering industry aimed at restricting exports and supporting national producers, aimed at ensuring the competitiveness of engineering enterprises:

- conducting a technical and economic audit of enterprises with the subsequent technological modernization of existing facilities (with the support of the state policy of creating an institutional foundation for industrial modernization, simplifying business conditions);
- Active implementation of international standards at domestic enterprises (ISO 9001-ISO 9006) with mandatory assessment of compliance with the requirements of technical regulations;
- the use of models of coordinated interaction of the enterprise (enterprise – region – state) to increase the adaptive capacity of the enterprise to changes in the external environment, search for optimal development and increase the sustainability of the competitive positions of engineering enterprises in the domestic market;
- Innovative staffing of high-tech development of engineering enterprises.

3.8 Development of the Land Market in Ukraine

At the present stage of socio-economic development of Ukraine there are more slogans concerning the completion of the land reform, because the effectiveness of agricultural production, economic, social and demographic situation of our country depends on the state of of land relations development.

The land reform in Ukraine is an important part of the economic transformations that take place in our country on the way to the establishment of market relations. During the years of land reform, the legal field and the necessary legal framework for the further successful formation of a market economy have been formed in the main. On the one hand, land reform has had a significant